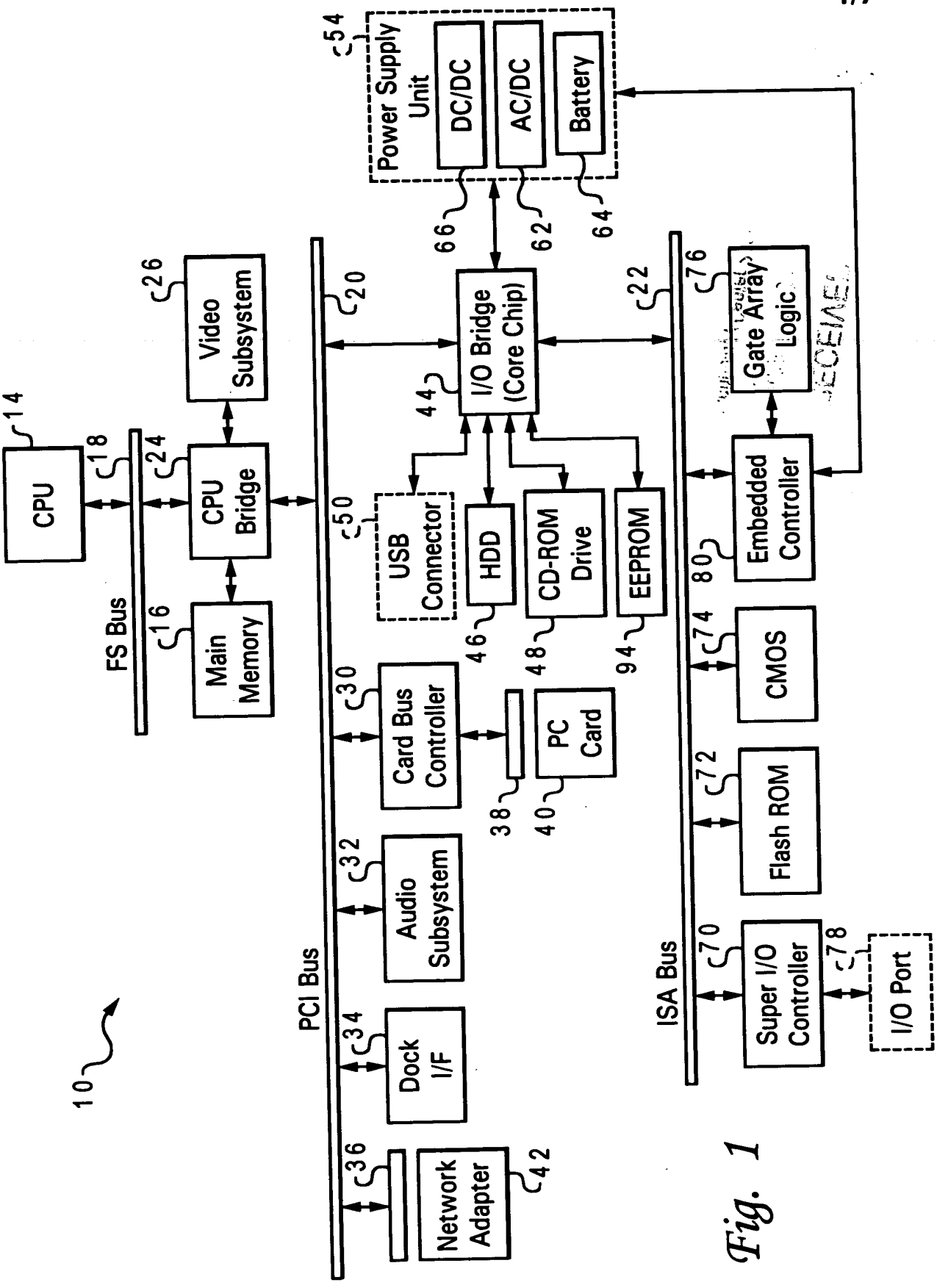
10
CPU
14
18
FS Bus
16
Main Memory
CPU Bridge
24
Video Subsystem
26
PCI Bus
20
Power Supply Unit
54
DC/DC
AC/DC
Battery
66
62
64
I/O Bridge (Core Chip)
44
22
USB Connector
50
HDD
46
CD-ROM Drive
48
EEPROM
94
Card Bus Controller
30
PC Card
38
40
Audio Subsystem
32
Dock I/F
34
Network Adapter
36
42
ISA Bus
Gate Array Logic
76
Embedded Controller
80
CMOS
74
Flash ROM
72
Super I/O Controller
70
I/O Port
78

Fig. 1

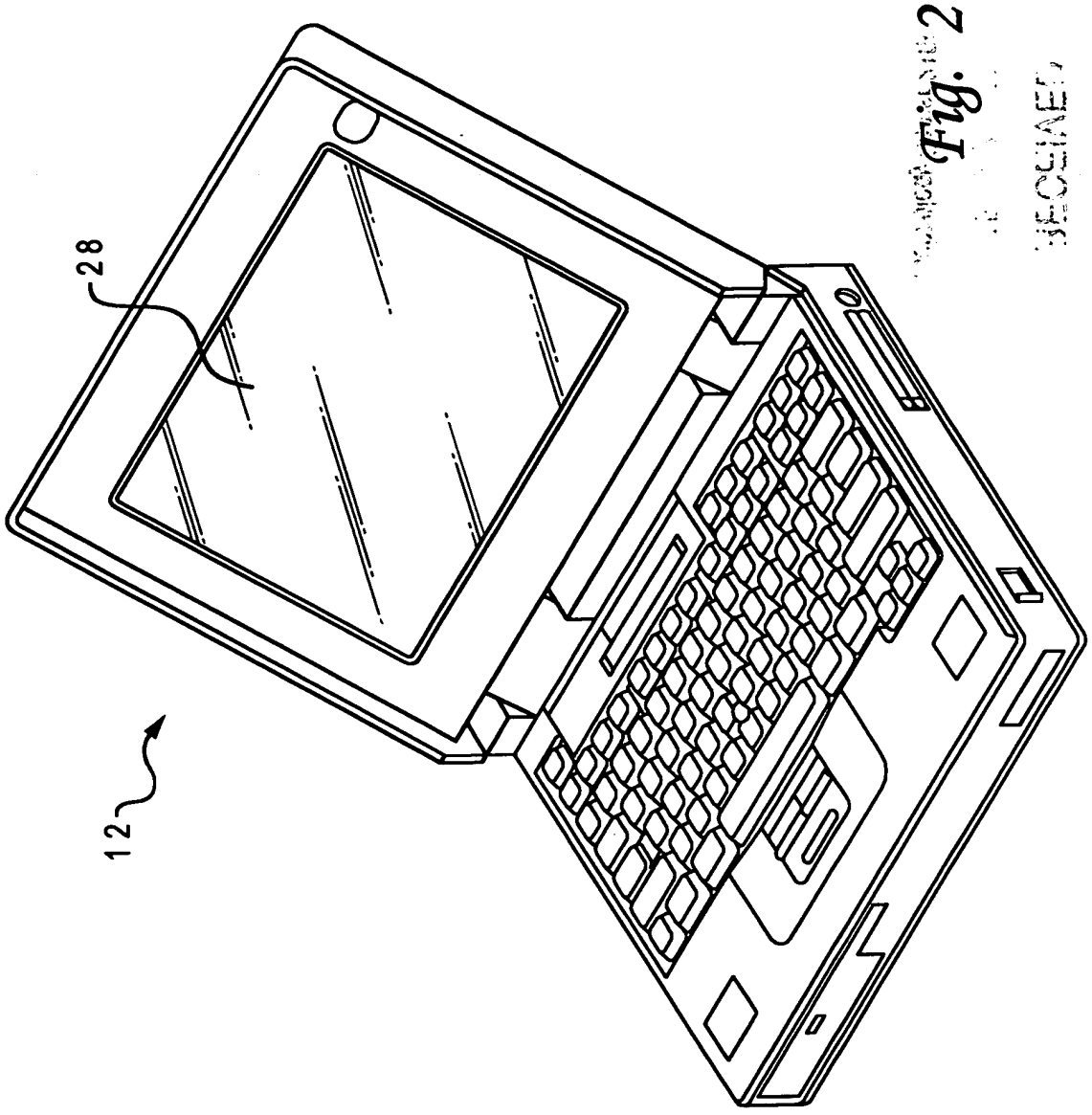

Fig. 2

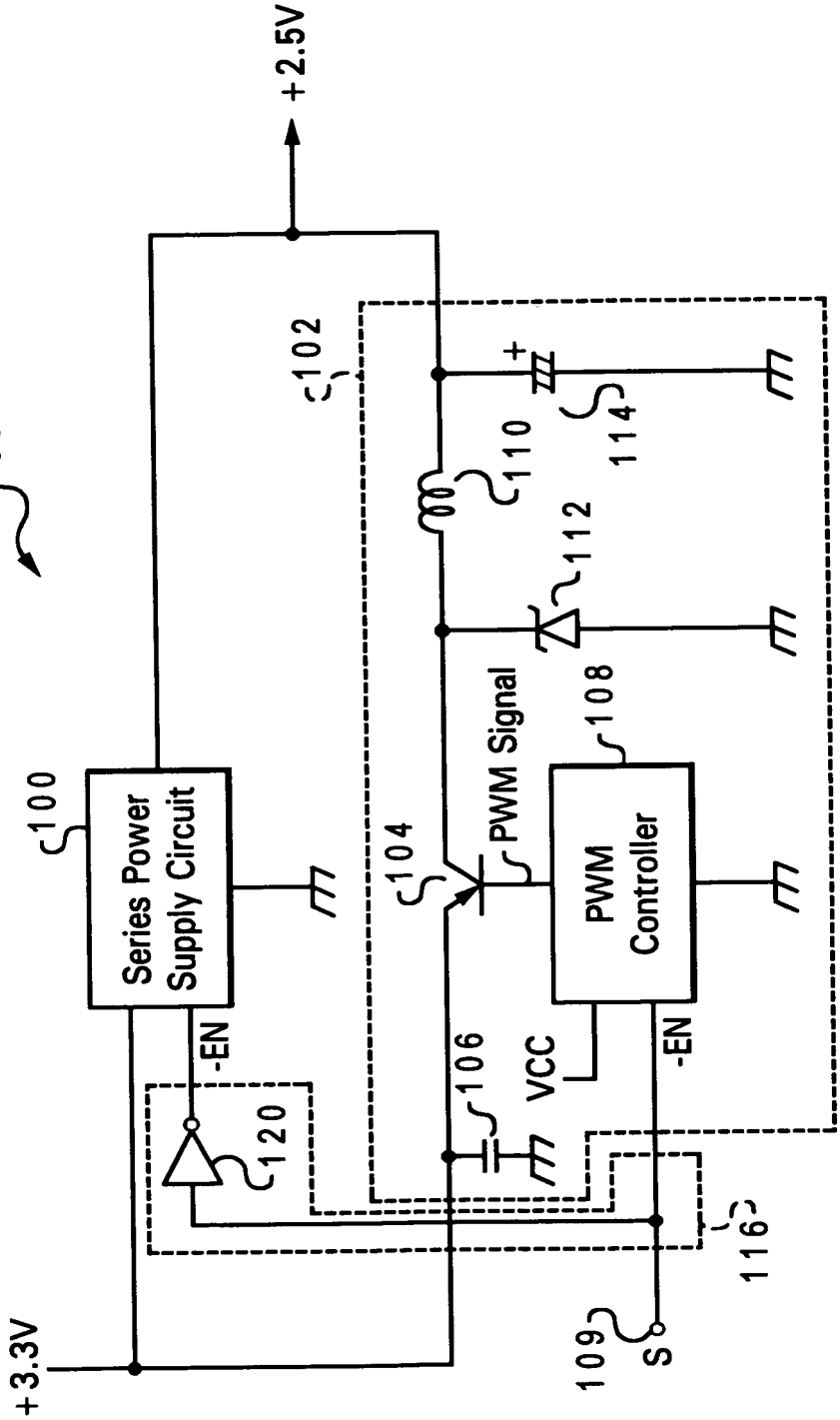
+2.5V
66
102
110
112
114
100
Series Power Supply Circuit
104
PWM Signal
108
PWM Controller
-EN
106
VCC
-EN
120
116
+3.3V
109
S

Fig. 3

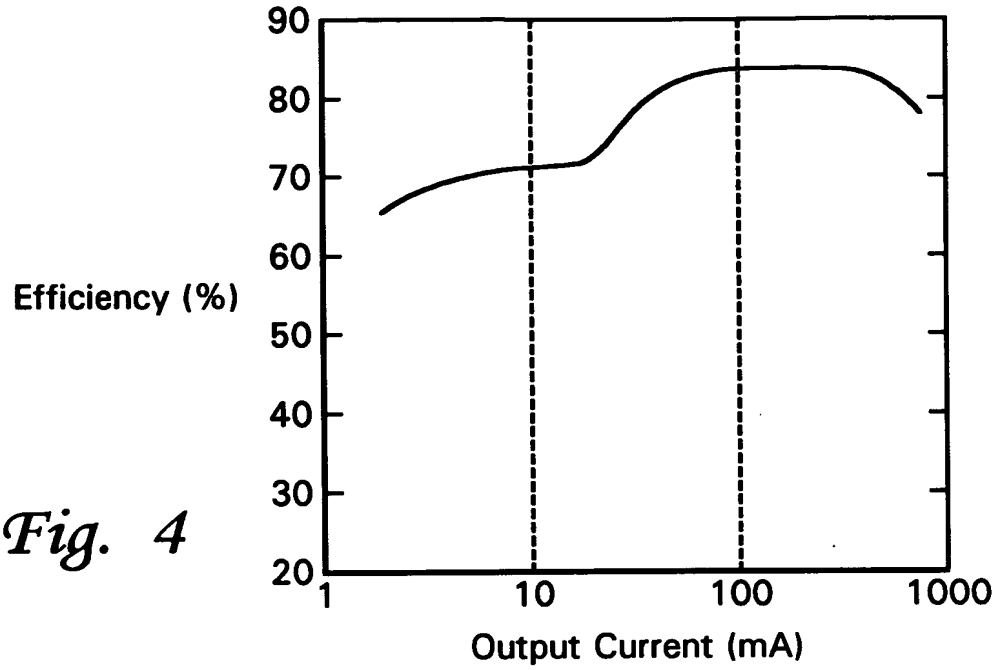
90
80
70
60
50
40
30
20
Efficiency (%)
1
10
100
1000
Output Current (mA)

Fig. 4

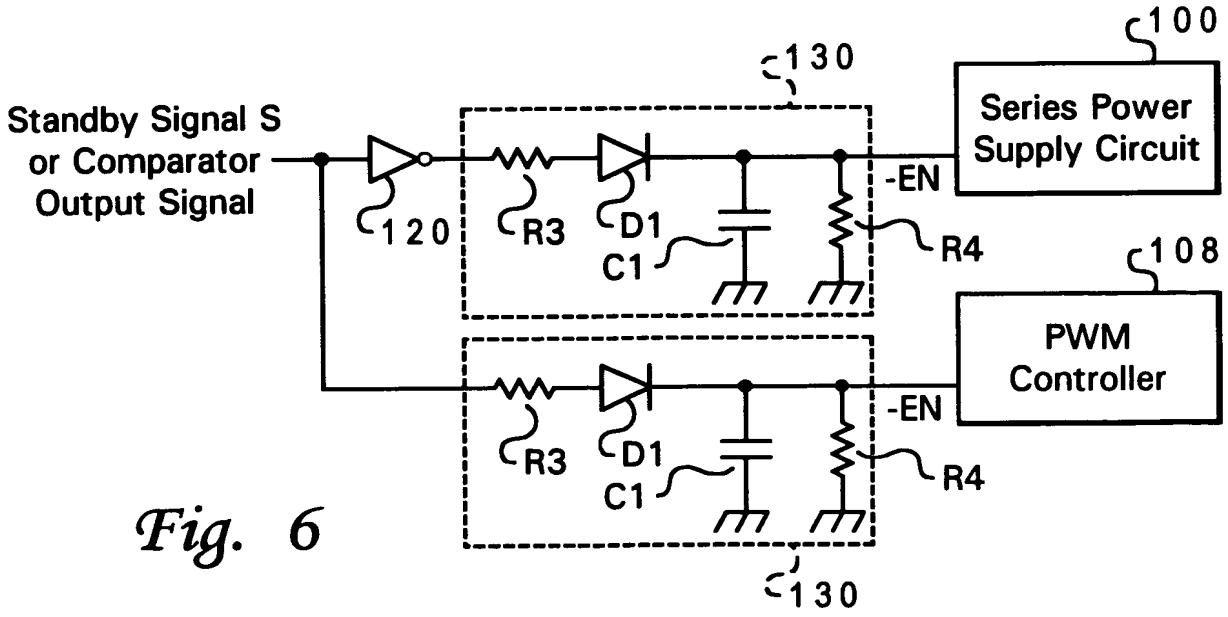
100
130
Standby Signal S
or Comparator
Output Signal
120
R3
D1
C1
R4
-EN
Series Power
Supply Circuit
108
PWM
Controller
-EN
R3
D1
C1
R4
130

Fig. 6

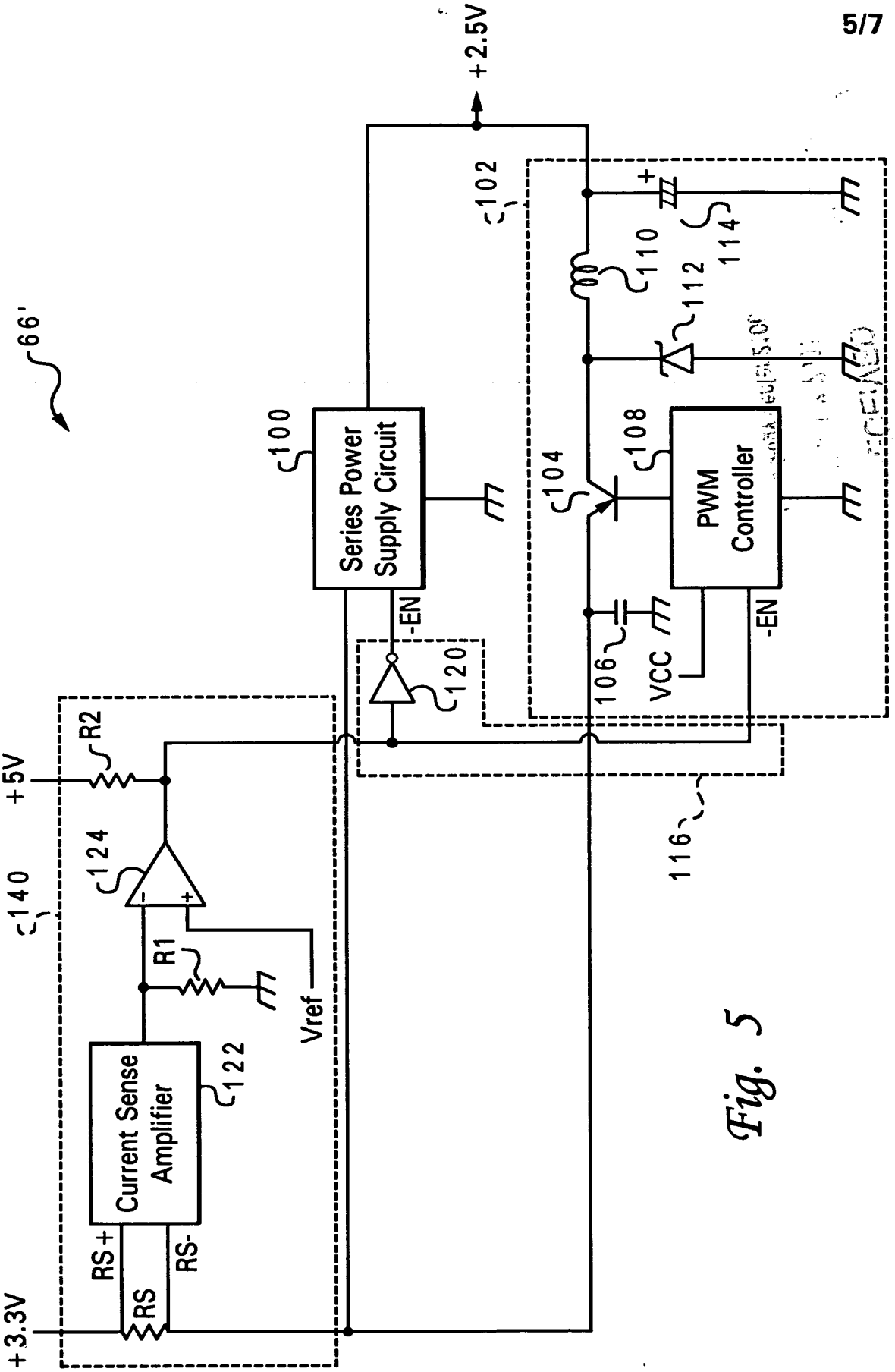
66'
+2.5V
102
110
112
114
100
Series Power Supply Circuit
104
108
PWM Controller
-EN
120
106
VCC
-EN
116
+5V
R2
124
140
R1
Vref
Current Sense Amplifier
122
RS+
RS
RS-
+3.3V

Fig. 5

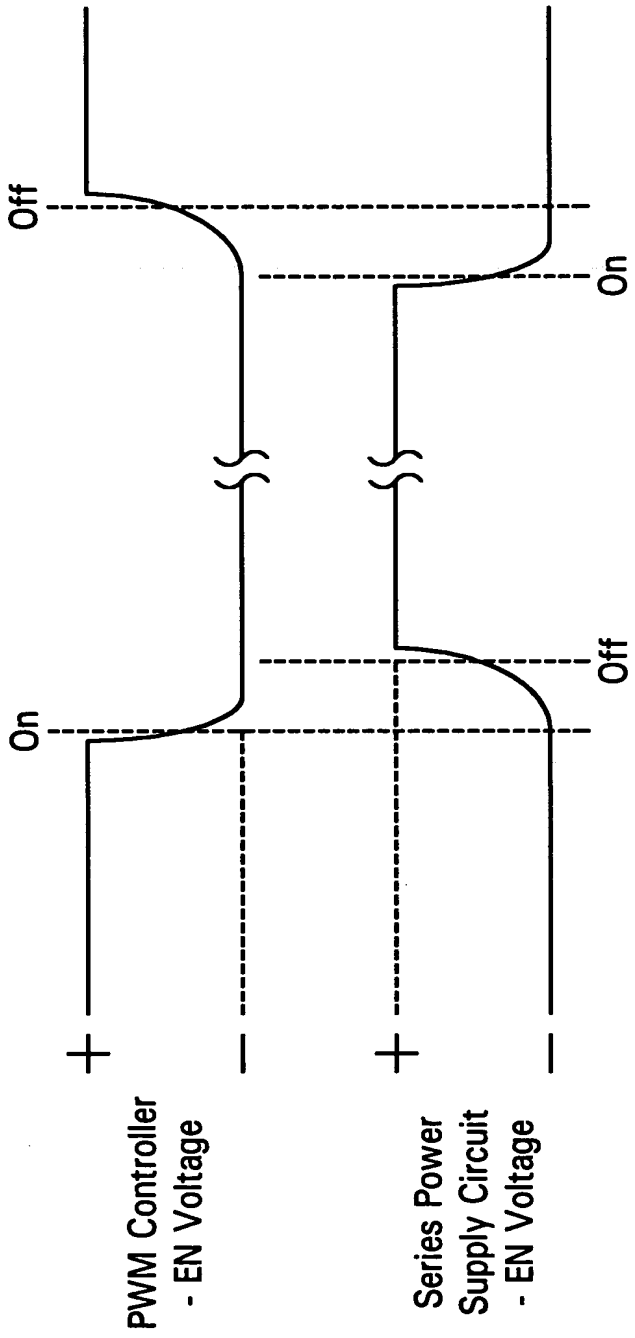
Off
On
On
Off
+
−
+
−
PWM Controller
- EN Voltage
Series Power
Supply Circuit
- EN Voltage

Fig. 7

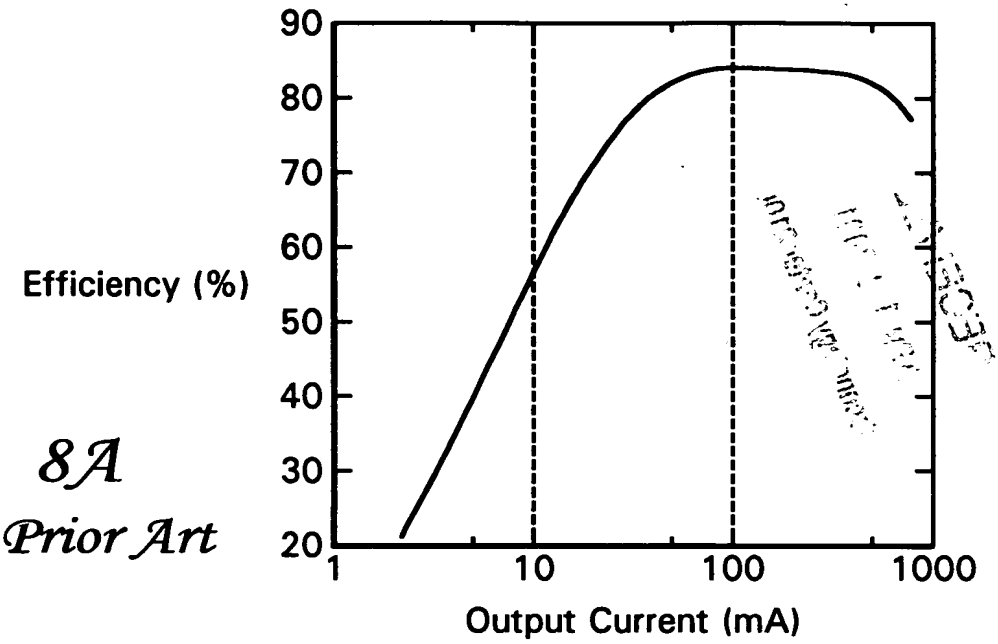

Fig. 8A
Prior Art

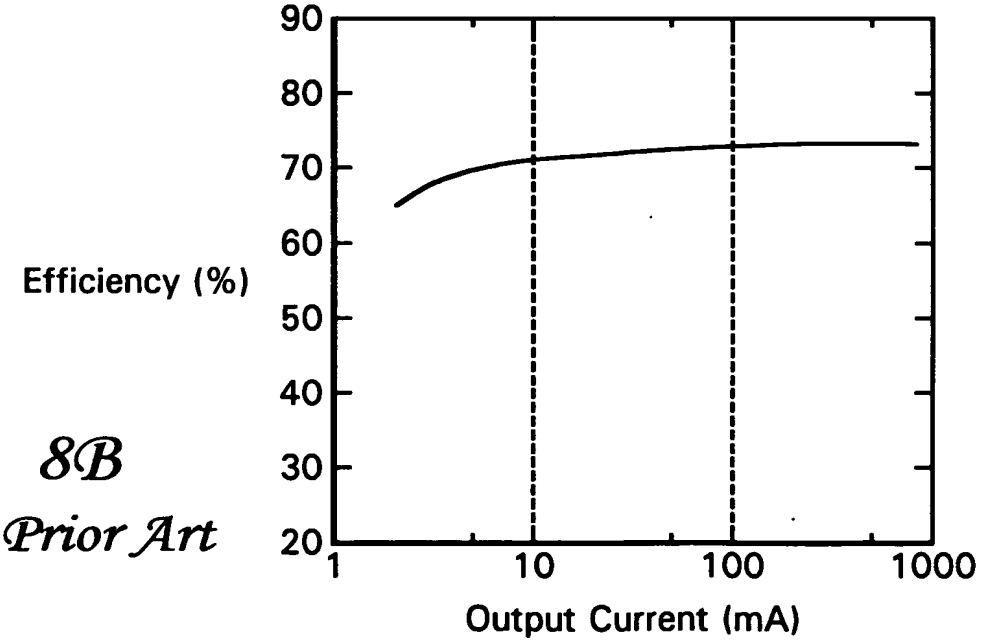

Fig. 8B
Prior Art